

ABSTRACT

A network processing system is described that functions as a policy gateway in order to enforce programmable network policies designed to provide quality of service in and across networks. The programmable network policies are converted into an image load file using a management interface at a remote server, and sent to the network processing system where the image is loaded into a processing engine. The network processing system includes line interfaces to take the data from the network and to send processed data back onto the network. Unidirectional processing engines take the data from the line interfaces, and associate each data packet with an identifier, which identifies the flow of which the data packet is a part. The flows are then compared to the database of programmable network policies and the processing engine determines a treatment based on the results of the comparison. A quality of service processor in the processing engine then uses the treatment to modify and direct the data packets in a manner consistent with the network policies.

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